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Title:The investigation of the gain and terahertz pulse of carbon nanotube dipole antenna

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Abstract:According to their physical features, the antenna arrays and single carbon nanotube dipole antenna have been investigated by CST MICROWAVE STUDIO, stimulating the far field distribution, evaluating and analyzing the key properties (scattering parameters, standing wave ratio, and gain). The size of antenna is optimized and by virtue of setting probe, the observation and comparison of terahertz pulse wave is realized. Our results show that antenna array can improve the gain.

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Main heading:Carbon nanotubes

Controlled terms:Antenna arrays - Scattering parameters - Terahertz waves

Uncontrolled terms:Antenna gains - CST microwave studio - Far field distribution - Physical features - Single carbon nanotube - Standing-wave ratio - Terahertz pulse

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